



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Whitty, et al.  
Serial No.: not assigned yet  
Filing Date: herewith  
For: Interferon-Beta Fusion Proteins and Uses

CERTIFICATE OF EXPRESS MAILING

I hereby certify that this correspondence is being deposited with the United States Post Office via Express Mail Label EL475127505US addressed to BOX PATENT APPLICATION, Commissioner for Patents, Washington, D.C. 20231 on the date shown below.

Date: 11 APRIL 2001 Signature: *Patricia H. H. [Signature]*

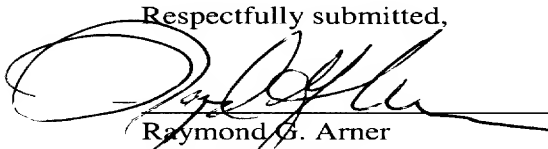
STATEMENT REGARDING SEQUENCE LISTING

Applicant hereby submits a diskette containing a machine-readable copy of the Sequence Listing done in PatentIn 2.0.

The contents of the paper and computer readable copies are the same and, include no new matter, as required by 37 C.F.R. 1.821 (e). The sequences on the diskette and on the paper listing are identical to the sequences submitted in the application as filed.

Please charge our deposit account 02-2327 for any deficiencies.

Date: 16 Apr. 2001

Respectfully submitted,  
  
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Reg. No. 32,958  
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14 Cambridge Center  
Cambridge, MA 02142  
(617) 679-2857

SCANNED, # 8

# SEQUENCE LISTING

<110> BIOGEN, INC.

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<140> PCT/US99/24200

<141> 1999-10-15

<150> 60/120,237

<151> 1999-02-16

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<170> PatentIn Ver. 2.0

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115 120 125

Lys Leu Glu Lys Glu Asp Phe Thr Arg Gly Lys Leu Met Ser Ser Leu

$g^{(1)}(z)$	$g^{(2)}(z)$	$g^{(3)}(z)$	$g^{(4)}(z)$	$g^{(5)}(z)$	$g^{(6)}(z)$	$g^{(7)}(z)$	$g^{(8)}(z)$	$g^{(9)}(z)$	$g^{(10)}(z)$	$g^{(11)}(z)$	$g^{(12)}(z)$	$g^{(13)}(z)$	$g^{(14)}(z)$	$g^{(15)}(z)$	$g^{(16)}(z)$	$g^{(17)}(z)$	$g^{(18)}(z)$	$g^{(19)}(z)$	$g^{(20)}(z)$	$g^{(21)}(z)$	$g^{(22)}(z)$	$g^{(23)}(z)$	$g^{(24)}(z)$	$g^{(25)}(z)$	$g^{(26)}(z)$	$g^{(27)}(z)$	$g^{(28)}(z)$	$g^{(29)}(z)$	$g^{(30)}(z)$	$g^{(31)}(z)$	$g^{(32)}(z)$	$g^{(33)}(z)$	$g^{(34)}(z)$	$g^{(35)}(z)$	$g^{(36)}(z)$	$g^{(37)}(z)$	$g^{(38)}(z)$	$g^{(39)}(z)$	$g^{(40)}(z)$	$g^{(41)}(z)$	$g^{(42)}(z)$	$g^{(43)}(z)$	$g^{(44)}(z)$	$g^{(45)}(z)$	$g^{(46)}(z)$	$g^{(47)}(z)$	$g^{(48)}(z)$	$g^{(49)}(z)$	$g^{(50)}(z)$	$g^{(51)}(z)$	$g^{(52)}(z)$	$g^{(53)}(z)$	$g^{(54)}(z)$	$g^{(55)}(z)$	$g^{(56)}(z)$	$g^{(57)}(z)$	$g^{(58)}(z)$	$g^{(59)}(z)$	$g^{(60)}(z)$	$g^{(61)}(z)$	$g^{(62)}(z)$	$g^{(63)}(z)$	$g^{(64)}(z)$	$g^{(65)}(z)$	$g^{(66)}(z)$	$g^{(67)}(z)$	$g^{(68)}(z)$	$g^{(69)}(z)$	$g^{(70)}(z)$	$g^{(71)}(z)$	$g^{(72)}(z)$	$g^{(73)}(z)$	$g^{(74)}(z)$	$g^{(75)}(z)$	$g^{(76)}(z)$	$g^{(77)}(z)$	$g^{(78)}(z)$	$g^{(79)}(z)$	$g^{(80)}(z)$	$g^{(81)}(z)$	$g^{(82)}(z)$	$g^{(83)}(z)$	$g^{(84)}(z)$	$g^{(85)}(z)$	$g^{(86)}(z)$	$g^{(87)}(z)$	$g^{(88)}(z)$	$g^{(89)}(z)$	$g^{(90)}(z)$	$g^{(91)}(z)$	$g^{(92)}(z)$	$g^{(93)}(z)$	$g^{(94)}(z)$	$g^{(95)}(z)$	$g^{(96)}(z)$	$g^{(97)}(z)$	$g^{(98)}(z)$	$g^{(99)}(z)$	$g^{(100)}(z)$	$g^{(101)}(z)$	$g^{(102)}(z)$	$g^{(103)}(z)$	$g^{(104)}(z)$	$g^{(105)}(z)$	$g^{(106)}(z)$	$g^{(107)}(z)$	$g^{(108)}(z)$	$g^{(109)}(z)$	$g^{(110)}(z)$	$g^{(111)}(z)$	$g^{(112)}(z)$	$g^{(113)}(z)$	$g^{(114)}(z)$	$g^{(115)}(z)$	$g^{(116)}(z)$	$g^{(117)}(z)$	$g^{(118)}(z)$	$g^{(119)}(z)$	$g^{(120)}(z)$	$g^{(121)}(z)$	$g^{(122)}(z)$	$g^{(123)}(z)$	$g^{(124)}(z)$	$g^{(125)}(z)$	$g^{(126)}(z)$	$g^{(127)}(z)$	$g^{(128)}(z)$	$g^{(129)}(z)$	$g^{(130)}(z)$	$g^{(131)}(z)$	$g^{(132)}(z)$	$g^{(133)}(z)$	$g^{(134)}(z)$	$g^{(135)}(z)$	$g^{(136)}(z)$	$g^{(137)}(z)$	$g^{(138)}(z)$	$g^{(139)}(z)$	$g^{(140)}(z)$	$g^{(141)}(z)$	$g^{(142)}(z)$	$g^{(143)}(z)$	$g^{(144)}(z)$	$g^{(145)}(z)$	$g^{(146)}(z)$	$g^{(147)}(z)$	$g^{(148)}(z)$	$g^{(149)}(z)$	$g^{(150)}(z)$	$g^{(151)}(z)$	$g^{(152)}(z)$	$g^{(153)}(z)$	$g^{(154)}(z)$	$g^{(155)}(z)$	$g^{(156)}(z)$	$g^{(157)}(z)$	$g^{(158)}(z)$	$g^{(159)}(z)$	$g^{(160)}(z)$	$g^{(161)}(z)$	$g^{(162)}(z)$	$g^{(163)}(z)$	$g^{(164)}(z)$	$g^{(165)}(z)$	$g^{(166)}(z)$	$g^{(167)}(z)$	$g^{(168)}(z)$	$g^{(169)}(z)$	$g^{(170)}(z)$	$g^{(171)}(z)$	$g^{(172)}(z)$	$g^{(173)}(z)$	$g^{(174)}(z)$	$g^{(175)}(z)$	$g^{(176)}(z)$	$g^{(177)}(z)$	$g^{(178)}(z)$	$g^{(179)}(z)$	$g^{(180)}(z)$	$g^{(181)}(z)$	$g^{(182)}(z)$	$g^{(183)}(z)$	$g^{(184)}(z)$	$g^{(185)}(z)$	$g^{(186)}(z)$	$g^{(187)}(z)$	$g^{(188)}(z)$	$g^{(189)}(z)$	$g^{(190)}(z)$	$g^{(191)}(z)$	$g^{(192)}(z)$	$g^{(193)}(z)$	$g^{(194)}(z)$	$g^{(195)}(z)$	$g^{(196)}(z)$	$g^{(197)}(z)$	$g^{(198)}(z)$	$g^{(199)}(z)$	$g^{(200)}(z)$	$g^{(201)}(z)$	$g^{(202)}(z)$	$g^{(203)}(z)$	$g^{(204)}(z)$	$g^{(205)}(z)$	$g^{(206)}(z)$	$g^{(207)}(z)$	$g^{(208)}(z)$	$g^{(209)}(z)$	$g^{(210)}(z)$	$g^{(211)}(z)$	$g^{(212)}(z)$	$g^{(213)}(z)$	$g^{(214)}(z)$	$g^{(215)}(z)$	$g^{(216)}(z)$	$g^{(217)}(z)$	$g^{(218)}(z)$	$g^{(219)}(z)$	$g^{(220)}(z)$	$g^{(221)}(z)$	$g^{(222)}(z)$	$g^{(223)}(z)$	$g^{(224)}(z)$	$g^{(225)}(z)$	$g^{(226)}(z)$	$g^{(227)}(z)$	$g^{(228)}(z)$	$g^{(229)}(z)$	$g^{(230)}(z)$	$g^{(231)}(z)$	$g^{(232)}(z)$	$g^{(233)}(z)$
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Glu Tyr Ser His Cys Ala Trp Thr Ile Val Arg Val Glu Ile Leu Arg  
165 170 175

Asn Phe Tyr Phe Ile Asn Arg Leu Thr Cys Tyr Leu Arg Asn Gly Gly  
180 185 190

Gly Gly Ser Val Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro  
195 200 205

Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys  
210 215 220

Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val  
225                    230                    235                    240

Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp  
245 250 255

Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr  
260 265 270

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp  
275 280 285

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu  
290 295 300

Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg  
305                    310                    315                    320

Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys  
325 330 335

Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp  
340 345 350

Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys  
355 360 365

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser  
370 375 380

Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser  
385                    390                    395                    400

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser  
405 410 415

Leu Ser Leu Ser Pro Gly Lys  
420